

Summary of the Key Findings

OBSERVATION			
	Knowledge, practices, beliefs	Local functions	Strengths, opportunities advantages
History and nature of floods	<ul style="list-style-type: none"> • Experience of different types of floods, location of previous floods, level of previous water levels, change in water levels, changes of river paths and in river size that occurred in their own locality 	Instrumental	<ul style="list-style-type: none"> • Detailed information related to the nature and history of floods in people's locality based on past experience, daily observation, and monitoring of the local surroundings • Landscape interpretation
Evolution of vulnerability to floods	<ul style="list-style-type: none"> • Social and gender vulnerabilities: people are not equal in their capacity to respond to floods • Process of pauperisation: the flood contributes to making the poor poorer 	—	<ul style="list-style-type: none"> • Information related to the perceived evolution of people's physical and social vulnerability to floods and the factors related to it
	Weaknesses, obstacles, constraints	Potential applications	
History and nature of floods	<ul style="list-style-type: none"> • Prior experience forgotten due to resettlement or frequency of natural hazards 	<ul style="list-style-type: none"> • Better understanding of local variability/specificities and processes • Understanding of local perceptions of natural hazards • Information can be useful for hazard mapping, survey, and other inventories combined with conventional knowledge • Part of the process of data 'triangulation' 	
Evolution of vulnerability to floods	<ul style="list-style-type: none"> • Complexity: various factors at play and/or acting simultaneously or not. For instance, 'poverty' is relative and the time factor needs to be taken into account. Every other factor being the same, a family with many children will be more vulnerable to floods than when the children have grown up and are able to work. 	<ul style="list-style-type: none"> • Understanding local perceptions of floods together with other stresses • Understanding how people's vulnerability to flood hazard is changing over time • Identification of vulnerable groups and individuals 	

ANTICIPATION			
	Knowledge, practices, beliefs	Local functions	Strengths, opportunities advantages
Early warning signals of flash floods	<ul style="list-style-type: none"> Ability to identify and interpret early warning signals of floods based on environmental indicators, weather interpretations/ predictions, smells, sounds, location and types of rain, unusual appearance and movement of wildlife, etc. 	Instrumental Psychological	<ul style="list-style-type: none"> Rapid assessment Trust Cost effective Ability to save life
Time thresholds and emergency measures	<ul style="list-style-type: none"> Knowledge of when to run (or stay), when to start storing food and firewood, build elevated platforms, move important belongings, stay awake, leave the house 	Instrumental	
Escape routes and safe places for humans and cattle	<ul style="list-style-type: none"> Knowledge of where to run (or stay), where are the safest and fastest escape routes, and where to build houses 	Instrumental	<ul style="list-style-type: none"> Few people die from floods. Floods mainly affect agricultural land and property (buildings)
Critical actors and skills	<ul style="list-style-type: none"> Ability to trust local guides' advice and predictions (e.g., elders) 	Instrumental Psychological	<ul style="list-style-type: none"> Trust, respect
Weaknesses, obstacles, constraints		Potential applications	
Early warning signals of flash floods			<ul style="list-style-type: none"> To combine with other 'modern' techniques and information
Time thresholds and emergency measures	<ul style="list-style-type: none"> Prior experience forgotten Bounded rationality: people's rationality is limited to their own information and beliefs. For instance they may not run away when the water rises because they fear that their belongings are going to be stolen by others 		<ul style="list-style-type: none"> Recognise the differences between local knowledge and common sense: 'running away' when the water starts rising for instance is not always 'common sense' Understanding and accounting for people's 'bounded rationality'
Escape routes and safe places for humans and cattle	<ul style="list-style-type: none"> Risk of thieves Some castes are not accepted in the same place as other castes 		
Critical actors and skills	<ul style="list-style-type: none"> Loss of traditional knowledge and decreasing trust in it from younger generations due to change in education system 		<ul style="list-style-type: none"> Reviving the place of traditional knowledge and skills in school curricula

ADAPTATION			
	Knowledge, practices, beliefs	Local functions	Strengths, opportunities advantages
Technical adaptations	<ul style="list-style-type: none"> Houses: combining materials for house construction, increasing the plinths, consolidating and protecting walls Storage: grain storage, multipurpose platforms, circular mud repositories Stream control, drinking water, transportation 	Instrumental	<ul style="list-style-type: none"> Use of local material (e.g., banana, bamboo, sand) and local skills (e.g., carpenters) Food security Most of the time effective to decrease the impacts of floods and cost efficient
Social capital	<ul style="list-style-type: none"> Ability to find psychological and financial and technical support from relatives and neighbours 	Instrumental Psychological Sociological	<ul style="list-style-type: none"> Collective security system through cooperation, strong social support networks or system Reduce sense of people's helplessness Social and psychological assurance More men working outside the village which provides more cash and therefore increases the access to assets for the family
Spatial and social mobility/diversity	<ul style="list-style-type: none"> Dispersed landholdings Economic diversification 	Instrumental	<ul style="list-style-type: none"> Having landholdings located at different places contributes to spread the risk of losing assets from natural hazards
Food security	<ul style="list-style-type: none"> Collecting food for people and cattle Collecting and storing firewood 	Instrumental	–
Natural resources management	<ul style="list-style-type: none"> Restructuring cropping patterns and landholdings Regulating access to grazing land and firewood Adopting soil conservation strategies 	Instrumental	<ul style="list-style-type: none"> Ability to turn change into opportunities
Other strategies and attitudes	<ul style="list-style-type: none"> Learning from previous mistakes and events Building upon institutional linkages and community initiatives 	Psychological	<ul style="list-style-type: none"> Reduce sense of people's helplessness

Adaptation cont.....		
	Weaknesses, obstacles, constraints	Potential applications
Technical adaptations	<ul style="list-style-type: none"> • Deterioration of natural resources which means, for example, that people have to go further away to get firewood and/or bamboo or they have to buy it from the market. • Labour intensive techniques • Even simple strategies such as elevating house plinths are not affordable to every household 	
Social capital	<ul style="list-style-type: none"> • Weakening of the collective security system due to increase of individualism as men are starting to work outside the village and to earn cash, and also maybe the ability to rely upon external help • Internal power relations/tensions between different social groups and castes as to who get the benefits from external help • Risk of getting indebted by taking loans with high interest rates from local money lenders 	<ul style="list-style-type: none"> • Reinforcement of people's self confidence • Identification of vulnerable groups, households, and individuals
Spatial and social mobility/diversity	<ul style="list-style-type: none"> • Diversification strategies might be useful on an ad-hoc basis only • Mainly wealthy households have dispersed landholdings 	
Food security	–	
Natural resources management	<ul style="list-style-type: none"> • The poorest do not have land so mainly the wealthier households benefit from the floods 	<ul style="list-style-type: none"> • Often this knowledge is held by one or two innovative farmers in the village who are willing to test new ideas and techniques. There is a need to identify these innovative people and use them as key knowledge carriers within the communities.
Other strategies and altitudes	<ul style="list-style-type: none"> • Increasing dependence on external help, and ability to blame and hold the government responsible for the disasters? 	

COMMUNICATION

	Knowledge, practices, beliefs	Local functions	Strengths, opportunities advantages
Communicating about past hazards	<ul style="list-style-type: none"> • Stories from local religious leaders, elders and family members • Proverbs, songs and traditions 	<ul style="list-style-type: none"> • Instrumental • Psychological 	<ul style="list-style-type: none"> • Local stories, songs, and proverbs enable knowledge transfer among people in the community and between different generations.
	Weaknesses, obstacles, constraints	Potential applications	
Communicating about past hazards	<ul style="list-style-type: none"> • Local singers are disappearing due to the spread of new technologies such as radio and television 	<ul style="list-style-type: none"> • Better tailor government coping mechanisms and communication with local cultural perceptions, values and traditions and therefore increase trust with external organizations • Better understand and respect and account for local practices and believes • Try to capitalise on cultural practices and values where they are strengths and attempt to moderate them where they may be obstacles (Bankoff 2004) 	